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ABSTRACT

The goal of the curriculum component of the vocational education improvement project conducted by the Metropolitan Nashville Public Schools was to develop articulated scope and sequence instructional guides for each vocational program in the schools. In an effort to strengthen and improve vocational instruction in the schools, an initial step has been taken toward the development of articulated vocational programs within the school system. The guides were developed to (1) help ensure that students are taught minimum competencies in secondary vocational program areas; (2) reduce the possibility of students experiencing gaps in continuity through omission of content from one level of instruction to another; (3) reduce the possibility of students being penalized when transferring from one secondary school to another due to different curricular sequences being taught; (4) maximize student benefits from local vocational programs through the use of relevant curriculum; (5) improve communication regarding curriculum development between faculty members at secondary and postsecondary levels; and (6) provide for greater involvement of business and industry in analyzing the extent to which vocational programs offered in the schools remain current, relevant, and responsive to labor needs. Implementing recommendations for continuous vocational curricula updating will improve vocational education in the Metropolitan Nashville Public School System. (Author/KC)

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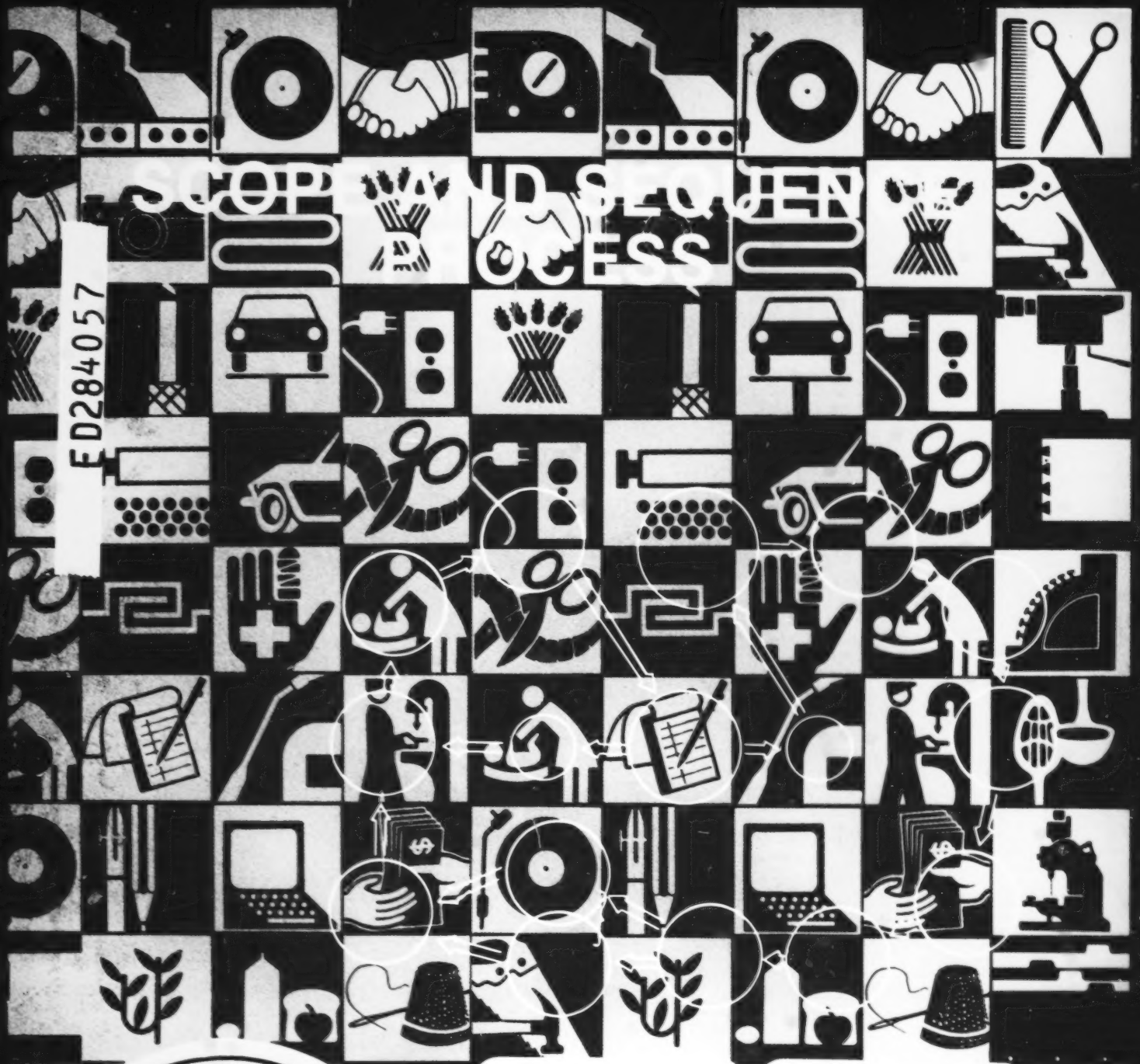

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Metropolitan Public Schools

Vocational Education Exemplary Project

Nashville - Davidson County, Tennessee

Charles O. Frazier, Director

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Metropolitan Public Schools
Nashville Davidson County, Tennessee
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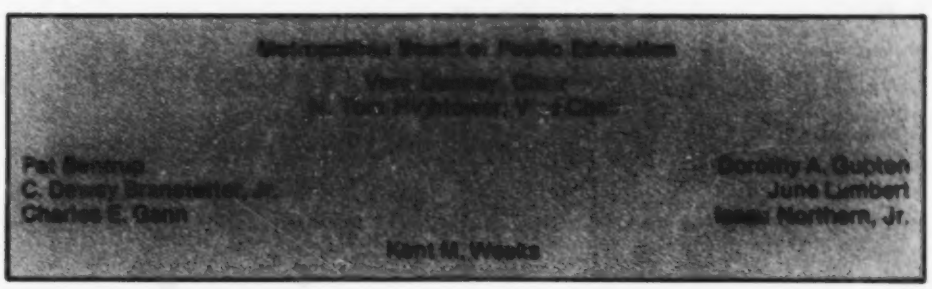
Assistant Superintendent
Curriculum and Instructional Services



SCOPE AND SEQUENCE PROCESS

UNITY FOR A QUALITY VOCATIONAL DELIVERY SYSTEM
IN THE METRO NASHVILLE COMMUNITY

1985

The material within was prepared under contract with the Tennessee State Department of Education, Division of Vocational Technical Education. Contractors undertaking funded projects are encouraged to express freely their professional judgment in conducting projects. However, opinions expressed may not reflect those of the funding agent, and no endorsement by that agency should be inferred.

Abstract

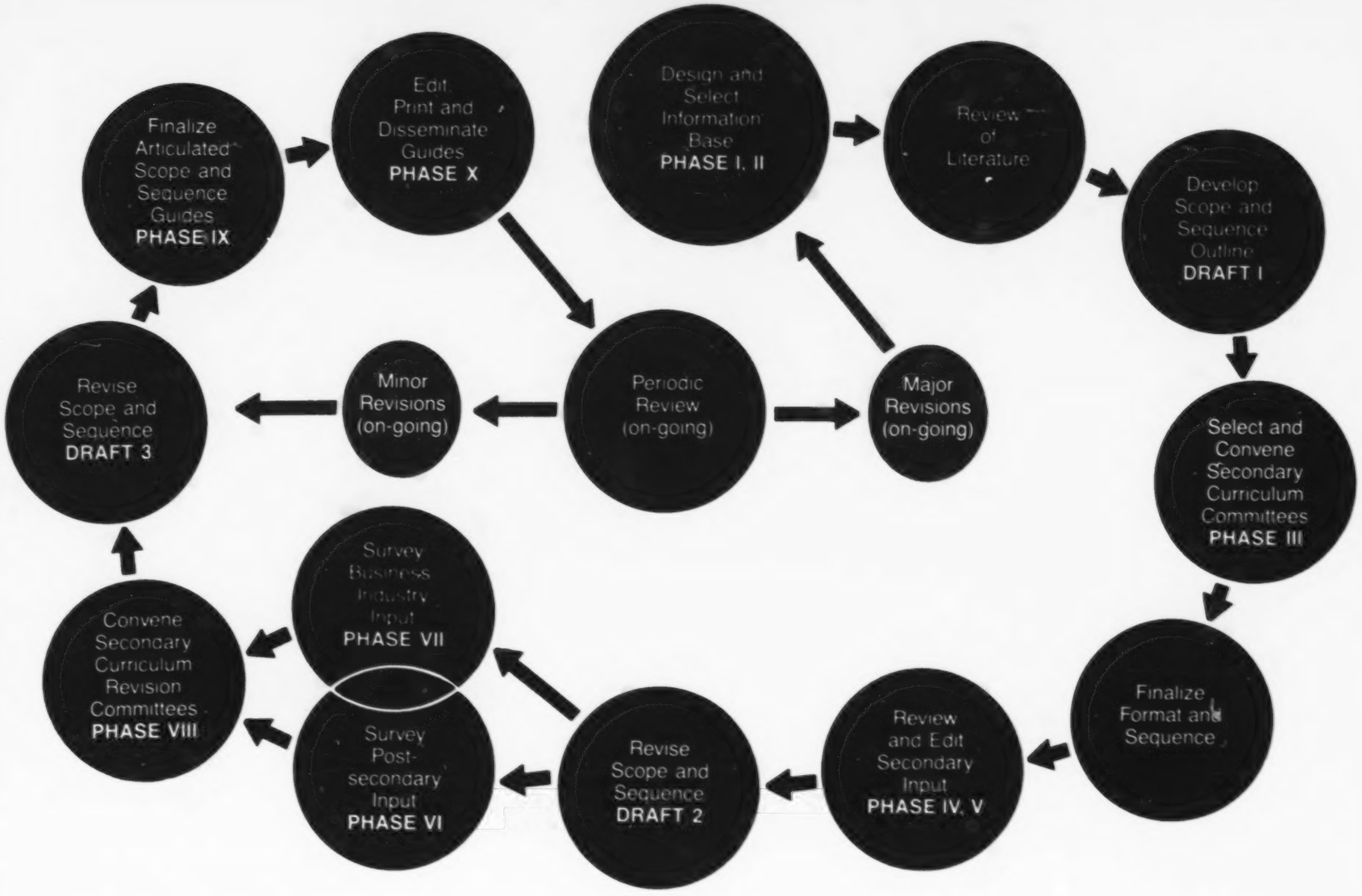
SCOPE AND SEQUENCE PROCESS

The goal of the curriculum component of the project, entitled Unity For A Quality Vocational Delivery System In the Metro Nashville Community, was to develop articulated scope and sequence instructional guides for each vocational program in Metro Schools. In an effort to strengthen and improve vocational instruction in Metropolitan Public Schools, an initial step has been taken toward the development of articulated vocational programs within the school system (horizontal articulation).

System-wide articulated scope and sequence instructional guides were developed to: (1) help assure that students are taught minimum competencies in secondary vocational program areas, (2) reduce the possibility of students experiencing gaps in continuity through omission of content from one level of instruction to another, (3) reduce the possibility of students being penalized when transferring from one secondary school to another due to different curricula sequences being taught, (4) maximize student benefits from local vocational programs through the use of relevant curriculum, (5) improve communication regarding curriculum development between faculty members at secondary and postsecondary levels (vertical articulation), and (6) provide for greater involvement of business and industry in analyzing the extent to which vocational programs offered in Metro remain current, relevant, and responsive to manpower needs.

A progressive, articulable system is in place and is presently being addressed by the Vocational Department of Metro Nashville Schools. Implementing recommendations that address continuous vocational curricula updating will most assuredly impact vocational education in the Metropolitan Nashville Public School System.

ARTICULATED SCOPE AND SEQUENCE DEVELOPMENT PROCESS


Design and Select Information Base PHASE I, II
Review of Literature
Develop Scope and Sequence Outline DRAFT I
Select and Convene Secondary Curriculum Committees PHASE III
Finalize Format and Sequence
Review and Edit Secondary Input PHASE IV, V
Revise Scope and Sequence DRAFT 2
Survey Post-secondary Input PHASE VI
Survey Business Industry Input PHASE VII
Convene Secondary Curriculum Revision Committees PHASE VIII
Revise Scope and Sequence DRAFT 3
Finalize Articulated Scope and Sequence Guides PHASE IX
Edit Print and Disseminate Guides PHASE X
Periodic Review (on-going)
Minor Revisions (on-going)
Major Revisions (on-going)

Phase I —Developed suggested scope and sequence topical outline and general program objectives for each program area.

Phase II —Surveyed all Metro Public Schools vocational instructors in each program area concerning views of outline items and objectives and tallied results.

Phase III —Selected curriculum committees to develop scope and sequence guides.

Phase IV —Reviewed and edited scope and sequence guides developed by curriculum committees.

Phase V —Mailed edited guides to Metro instructors for review and editing.

Phase VI —Solicited postsecondary input on scope and sequence outlines and tallied results.

Phase VII —Solicited business and industry input on scope and sequence outlines and tallied results.

Phase VIII —Convened all Metro vocational instructors to review input and recommend a guide for each program area.

Phase IX —Reconvened all Metro vocational instructors and program coordinators for final review of scope and sequence guides.

Phase X —Edited, printed, and disseminated 37 scope and sequence guides.

ARTICULATED SCOPE AND SEQUENCE DEVELOPMENT PROCESS FLOW CHART

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Introduction

The overall effectiveness of vocational education is determined to a large extent by its curricula. It is vital that the curricula meet the needs of the students and the needs of prospective employers.

"A vocational program incorporates many different aspects--from related class to shop or lab work, from youth organization activities to cooperative work experience. Each of these involves many different activities and responsibilities for the local vocational educator. It's readily apparent that no single individual can be excellent in all these various responsibilities. . . . Given that each local program will reflect the strengths and weaknesses of the instructor, the overall effectiveness of the program is almost certain to be a function of the curriculum . To the degree that curriculum is clearly defined and meets the needs of its target market, the program will be effective" (Gleason & Harvey, 1984).

The goal of the curriculum component of the project, entitled Unity For A Quality Vocational Delivery System In the Metro Nashville Community, was to develop articulated scope and sequence instructional guides for each vocational program in Metro Schools. An articulated vocational curriculum allows a student to move from one level of instruction to the next without repeating instructions for learning tasks already mastered, and without experiencing gaps in the presentation of relevant instructional material.

In an effort to strengthen and improve vocational instruction in Metropolitan Public Schools, an initial step has been taken toward the development of articulated vocational programs within the school system (horizontal articulation). System-wide articulated scope and sequence instructional guides were developed to: (1) help assure that students are taught minimum competencies in secondary vocational program areas, (2) reduce the possibility of students experiencing gaps in continuity through omission of content from one level of instruction to another, (3) reduce the possibility of students

being penalized when transferring from one secondary school to another due to different curricula sequences being taught, (4) maximize student benefits from local vocational programs through the use of relevant curriculum, (5) improve communication regarding curriculum development between faculty members at secondary and postsecondary levels (vertical articulation), and (6) provide for greater involvement of business and industry in analyzing the extent to which vocational programs offered in Metro remain current, relevant, and responsive to manpower needs.

Literature Review

A rather exhaustive review of literature reveals that written studies and printed materials concerning curriculum development are abundant. So abundant, in fact, that one may encounter problems in selecting materials for review. However, in the area of vocational/technical education curriculum, particularly articulated curriculum, written materials are narrow in scope and deal primarily with single subject curriculum development rather than with a process for multiple programs that "can be used on a continuing basis to update, revise and impact upon the quality of vocational curriculum" (Burger, 1976).

"A well structured and articulated curriculum is somewhat like a pyramid, it continues to build . . . (and) the first and most important step is determining the scope and sequence of a given program" (Widen, 1981). Secondary vocational education should progress from a scope and sequence outlining process that ensures continued update of vocational education curriculum, "based on community and student needs" (Devan & Epps, 1983).

A recent study revealed that a very high percentage of parents believe vocational education is very important, so much so that they rate it a close second to intellectual development (Boyer, 1983). Further, "a substantial population of young people . . . do not receive any additional training after high school" (Tennessee Task Force for Secondary Vocational Education, 1983). Michael L. Rask (1983) presents evidence that, "Eighty percent of all youth enrolled in the public schools will never complete a course of study at a college or university . . . (and that) over fifty percent of all secondary students . . . will never pursue formal education after departing high school." The paper by Rask, as well as studies recently reported by other educators, supports overwhelmingly that when there is development of comprehensive articulation between curriculum levels and between curriculum program areas and the world of work, the educational needs of the majority of students are provided. Nevertheless, while one may believe that "the demand for vocational training is strong . . . programs can suffer from dated curricula" (Kaercher, 1984); but, "Quality programs at the secondary level can impact positively on the state's employment and economic well-being, as well as provide relevant contexts in which students can learn basic skills" (Tennessee Task Force for Secondary Vocational Education, 1983).

Research studies point out and many administrators have learned over the years "that a curriculum handed down from a district or state office or formulated by a project group is rarely implemented in the way intended . . . . For this reason, the involvement in one or more phases of curriculum planning by all of those expected to participate in the operation of programs is recommended" (Tyler, 1980). One may assume that, "Ideally, the team approach will produce the best results" (Norton, Hamilton, Quinn, Harrington, and Miller-Beach, 1981).

The process used for curriculum development and updating should utilize teachers who will be using the curriculum materials for, "Few would dispute the statement that the teacher is central to the educational process" (Schaerer, 1980). The National Consortium for Educational Excellence (1983) included in a summary of recommendations that, "Teachers should participate in curriculum development and have a greater voice in selecting materials appropriate to their own subject area". "Teachers have contributions to make in all phases of planning because they . . . will be the persons who will conduct the program(s), and program advisory committees . . . can assist in developing a sequence of learning experiences involving both school sites and work sites" (Tyler, 1980).

Further, existing vocational program advisory committee members are invaluable resources in curriculum development "for if your friends can't tell you when change is needed, who can" (Griffith, 1983). Gene Bottoms (1983), AVA Executive Director, wrote regarding keeping programs current, "The new technology that is so radically changing the way work is done in America mandates changes in the way programs preparing workers for . . . occupations are taught." Since advisory committee members are comprised primarily of employers, "in the case of vocational education, employers should be included among the participants in (curriculum) planning because of their knowledge about occupational needs and opportunities" (Tyler, 1980). The Tennessee Task Force for Secondary Vocational Education (1983) recommended that, "Local educational agencies should develop an appropriate mechanism to involve business and industry in vocational program development and evaluation." The Task Force also stated that "Better utilization of local advisory councils . . . would be (an) effective tool for program improvement."

While the team approach to curriculum planning may not be conducive to taking all the necessary steps at one time, vocational education curriculum planning should be a comprehensive, systematic, and continuing process which ensures that programs will be periodically reviewed and improvements will be made where problems are identified (Tyler, 1980).

Methodology

In the scope and sequence process, efforts were made to incorporate input from postsecondary institutions and business/industry as well as Metro Public Schools vocational personnel. Letters were written to Metro Schools vocational administrators and instructors explaining the scope of the project and soliciting cooperation (see Appendix A for correspondence). Contact was also made with the following agencies, institutions, and resource personnel to collect current curricular materials: Educational Resource Information Center (ERIC); The National Center for Research in Vocational Education; Vocational/Technical Education Consortium of States; Vocational Instructional Materials Acquisition System; Tennessee Department of Education; Program Area State Specialists of the Tennessee Department of Vocational/Technical Education; Hurst-Systems of Middle Tennessee State University; and Vocational Program Area Coordinators of Metropolitan Public Schools.

Implementation by the Staff was managed by establishing the following phases:

Phase I - Developed suggested scope and sequence topical outline and general program objectives for each program area.

Phase II - Surveyed all Metro Public Schools vocational instructors in each

program area concerning views of outline items and objectives and tallied results.

Phase III - Selected curriculum committees to develop scope and sequence guides.

Phase IV - Reviewed and edited scope and sequence guides developed by curriculum committees.

Phase V - Mailed edited guides to Metro instructors for review and editing.

Phase VI - Solicited postsecondary input on scope and sequence outlines and tallied results.

Phase VII - Solicited business and industry input on scope and sequence outlines and tallied results.

Phase VIII- Convened all Metro vocational instructors to review input and recommend a guide for each program area.

Phase IX - Reconvened all Metro vocational instructors and program coordinators for final review of scope and sequence guides.

Phase X - Edited, printed, and disseminated scope and sequence guides.

Phase I: After collecting curricular materials for each program area, a suggested scope and sequence topical outline and general program objectives were developed by the staff for each area.

Phase II: The outlines and objectives were mailed to each instructor in all program areas. Instructors were asked to thoroughly review and prioritize the outline items according to: high - very important to teach, medium - important to teach, and low - somewhat important to teach. They were also asked to list materials that have been useful in their instructional programs. All information received from Metro instructors

was reviewed, compiled, and tallied by Project Staff. The tally form allowed for the recording of: (1) a rating of each instructional unit and topic, (2) suggested units or topics to add or delete, (3) general objectives, and (4) comments/suggestions (see tally forms in Appendix B).

Phase III: Metro vocational instructors were asked to participate in curriculum workshops. Approximately 85 instructors, two to five in each program area, convened in June, 1982, and May, 1983. Instructional guides from the material tallied in Phase II were developed using the following format: 1) forward, 2) introduction, 3) course description, 4) general course objectives, 5) course content in sequential topical outline form, 6) specific objectives for each unit, and 7) resource materials.

Phase IV: Project Staff reviewed and edited the guides completed by the curriculum workshop participants. The guides were edited for content, format, and sequence.

Phase V: Appropriate instructors were asked to review and edit the guides by making additions, deletions, and comments/suggestions they felt were necessary regarding content, sequence, format, time allotments, etc.

Phase VI: Project Staff visited postsecondary administrators to explain the goals of the curriculum component. The names of postsecondary instructors who would participate in the project were furnished by institutional administrators. Subsequently, letters were written to the potential postsecondary participants explaining the process. They were asked to help identify minimum competencies students should acquire in secondary vocational programs, and were also requested to prioritize instructional units/topics, make additions or deletions, and provide comments pertaining to the relevancy of the material. The responses were reviewed and tallied by Project Staff.

Phase VII: Business and industry input was solicited through craft/program committees. Project Staff met with craft committees and explained the goals of the Project. The committee members were asked to prioritize course content, provide

deletions or additions, and make comments pertaining to the relevancy of the content to meet the needs of entry level employees. Project Staff reviewed and tallied the responses.

Phase VIII: On June 6, and August 6, 1984, curriculum workshops were held for all vocational instructors during extended employment and during Inservice Education Days.

The purposes of the workshops' inservice activities were to review all input from secondary, postsecondary, and business/industry with regard to priority ranking, comments, and suggestions, and to recommend articulated scope and sequence outlines to be used by all Metro vocational instructors.

Phase IX: On August 22, 1984, draft copies of each of the revised and retyped outlines were submitted to program coordinators and vocational instructors for final review.

Phase X: After final review and editing by Project Staff and Metro Vocational Program Coordinators, scope and sequence guides were printed, bound, and disseminated to all instructors in each program area. All scope and sequence guides are included in the FULL FINAL REPORT PACKET. The guides may be found in Vol. I and Vol. II notebooks entitled Vocational Education Scope and Sequence. See Final Report of the FULL FINAL REPORT PACKET for information concerning further dissemination.

Results

The following 34 scope and sequence instructional guides were developed in six vocational service areas according to the process explained in this report:

AGRICULTURE/HORTICULTURE

Agriculture
Urban Horticulture

COOPERATIVE EDUCATION

Industrial Cooperative Education
Marketing and Distributive Education
VOE Cooperative Education

HEALTH OCCUPATIONS

Health Occupations

HOME ECONOMICS

Consumer and Homemaking
Child Care and Guidance
Food Management Production and Services

TRADE AND INDUSTRIAL

Air Conditioning, Heating, and Refrigeration
Aircraft Mechanics
Auto Body Repair
Auto Mechanics
Commercial Art
Commercial Foods
Commercial Photography
Cosmetology
Diesel Mechanics
Drafting
Electricity/Electronics
Electronic Recording
General Building Trades
General Metals
Machine Shop
Printing
Tailoring
Trowel Trades
Welding

VOCATIONAL OFFICE EDUCATION

VOE Accounting
VOE Clerical
VOE Computer Programming
VOE Data Processing
VOE Stenographic
Vocational Office Education (Introductory)

Recommendations will be made that scope and sequence outlines be developed and/or

completed for vocational exploratory programs, industrial arts programs, vocational advancement programs (VAP) and vocational improvement programs (VIP).

All completed scope and sequence guides are included in the FULL FINAL REPORT PACKET. They are contained in three ring notebooks entitled Vocational Education Scope and Sequence, Volume I and Volume II.

Of major importance in the development of scope and sequence guides is the input received from postsecondary institutions and from business and industry. Twelve postsecondary institutions were surveyed with five, or 42%, responding. However, a much better rate of return can be noted when viewing the fact that of the 20 program areas surveyed within the postsecondary institutions, responses were received from 19, or 91%, of the program areas. The response from business and industry was not as extensive as Project Staff had anticipated. Through craft committees, attempts were made to survey 16 program areas; only seven, or 44%, of the businesses/program areas responded.

It is very significant to note that 100% of the Metro Schools vocational instructors have been involved in the development of the scope and sequence instructional guides. Also, all Metro School vocational coordinators and program assistants, as well as the instructors, have had special responsibilities throughout the various phases of the developmental processes.

Conclusions and Recommendations

CONCLUSIONS

As a result of the literature review and activities of the Unity For a Quality Vocational Delivery System in the Metro Nashville Community Project, it can be concluded that:

(1) Vocational education is a vital part of public education in the Metropolitan Public Schools.

(2) Basic academic skills, as well as occupational skills, are of fundamental importance in preparing young people for productive lives, and must have equal priority within secondary vocational instruction.

(3) The vocational curriculum is more complex than the curriculum offered by other segments of education because it combines classroom instruction, laboratory work, participation in student organizations, and on-the-job training. In addition, vocational curricula must be updated more often and more extensively than other areas of the school curriculum (AVA Fact Sheet, 1983).

(4) The following two inservice/curriculum recommendations of a 1976 needs assessment conducted by The National Center for Vocational Education (for the Metro Nashville Public School System) have been implemented as a result of the local project's activities:

* Provide inservice education programs for vocational education personnel in the revision of existing curricula and the development of new curricula.
* Establish a system for producing planned change in vocational education in Metro Public Schools.

(5) As a result of activities implemented by the Vocational Education Exemplary Project Staff, thirty four scope and sequence instructional guides were developed through an articulated process. Information concerning dissemination of the guides beyond Metro Schools vocational personnel can be found in the Final Report of the FULL FINAL REPORT PACKET.

(6) Through the local projects' extensive articulated effort involving postsecondary institutions, business, industry, program/craft committees, and

vocational instructors and coordinators, a process has been established for ongoing analysis of vocational programs. If programs are to remain current, relevant, and responsive to local manpower needs, a close relationship must exist between education and employers. The success of vocational education depends upon this vital partnership.

RECOMMENDATIONS

To further articulate vocational curricula in Metropolitan Public Schools, it is recommended that:

1. The Department of Vocational Education initiate a long range plan for curriculum development to include:
   (a) development of scope and sequence outlines for vocational areas that were not completed as a part of this project (exploratory programs, industrial arts programs, and special needs programs such as VIP/VAP [vocational improvement programs/vocational advancement programs])
   (b) referencing of existing resources to units of instruction in each guide completed in this project
   (c) identification of units of instruction with little or no existing references and the development of resource materials for those units
   (d) convening of secondary and postsecondary instructors on a periodic basis to improve vertical articulation
   (e) increasing input from business and industry to be included in future vocational program development and evaluation
   (f) initiation by program coordinators to update curricula on a regular basis
2. Specific personnel, under the administration of the Director of Vocational, Adult, and Community Education, be designated to coordinate all future vocational education curriculum development activities.

"There is a need to develop planned, purposeful, and sequential vocational curricula that span the last two years of high school and the first two years of postsecondary education, and that are connected to planned on-the-job learning experiences. Such curricula provide the opportunities for students to connect the academic subjects with the practices in a broad educational field" (Bottoms, 1984). Systematic articulation and coordination of occupational preparatory curricula from the secondary through the postsecondary level or from the educational institution (secondary or postsecondary) to the job setting can only come about as a result of continuous planning.

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APPENDICES

APPENDIX A

Metropolitan Public Schools

2601 BRANSFORD AVENUE • NASHVILLE, TENN. 37204

November 23, 1981

TO: All Local School Administrative Personnel,
Vocational Instructors and Guidance Counselors

The Metropolitan Public Schools has received a grant from the State Department of Education, Division of Vocational-Technical Education to initiate "A Unified Approach to Vocational Program Quality through Curriculum Analysis, Community Involvement, and Interagency Cooperation."

The project will require three years to complete and the activities planned will be most beneficial to the Nashville community as well as the Metro Nashville Public Schools. It is anticipated that this project will be instrumental in setting the direction of vocational education programming and curriculum development in the Metro Schools.

The success of this project will depend largely on a cooperative and collaborative effort among all portions of the vocational delivery system. In the very near future, Dan Covington and James Currie, project staff, will be making personal contact and soliciting your ideas and input. We urge full cooperation and want you to be a vital part of the process as we plan for the future.

Sincerely,

Charles O. Frazier

Charles O. Frazier
Director

Lucille Nabors

Lucille Nabors
Assistant Superintendent
Program and Staff Development

Ernest C. Miller

E. C. Miller, Director
Vocational Education

COF/LN/ECM:fd

Metropolitan Public Schools

2601 BRANSFORD AVENUE • NASHVILLE, TENN. 37204

March 17, 1983

MEMORANDUM

TO: Program Assistants

FROM: Jim Currie, Vocational Education Exemplary Project

RE: Meeting with Vocational Craft Advisory Committee

We are presently in Phase VII of our Project's curriculum component. This phase is devoted to vertical articulation involving postsecondary institutions public/private and business/industry. In order to effectively address this phase, we are asked to meet with your Vocational Craft Committee at the next scheduled meeting. Would you please provide a list of your next scheduled meeting? The committee will be asked to review units of instruction and make recommendations based on their perception of current business/industry needs.

Your continued assistance in our effort to develop system-wide articulated instructional guides for each vocational program area is greatly appreciated.

Enclosure

cc: E. C. Miller
Dan Covington

Metropolitan Public Schools

2601 BRANSFORD AVENUE • NASHVILLE, TENN. 37204

TO: Postsecondary Vocational Instructors

FROM: James R. Currie, Vocational Education Exemplary Project
498 Hogan Road, 832-2550 or 832-2669

RE: Instructional Units and Levels of Skill Development for Metro's Vocational Programs

We need your help! We are conducting a study that we believe you will find interesting and also helpful for our graduates entering your program. The purpose of this study is to improve curriculum continuity and verify minimum competencies students should acquire in Metro's secondary vocational programs. Your assistance is vital; we will use this information to assist in the revision of our existing vocational programs.

The enclosed information consists of instructional units in topical outline which Metro vocational instructors suggest should be taught. The amount of time to devote to each unit has also been suggested. Please review and complete this information using the enclosed instruction sheet as a guide. Make any comments, add or delete any instructional units or tasks you feel should or should not be included. Feel free to call our office if you have any questions concerning this information.

We are requesting that you complete and submit to _____ within one week of receipt of this information.

JRC/jd

Enclosures

APPENDIX B

Instructional Units/Topics

HEALTH OCCUPATION I (First Semester)	Suggested Time	Priority H	Priority M	Priority L	Use the space below for clarifying comments justification of priority rankings (optional), suggested time to devote to each unit, or listing additional units or topics if space to the left is not sufficient.
ORIENTATION TO HEALTH CAREERS	4 weeks				How many hours?
Five Major Clusters in					Readjust time frame to 3 weeks to add more time to important study topics. Lack of facilities for practical clinical experience. Information about educational requirements for these would be helpful to students without having to go into each of these subjects.
Health Careers					
Direct care careers		2			
Therapeutic, restoration			2		
Diagnostic careers		1	1		
Community health careers		2			
Institutional careers		1		1	
Medical Careers					When you speak of careers, should the word "dentist", "dental hygenist", "dental laboratory technician", not be used? You did it from medical secretary onward.
Dentistry		1	1	1	
Dental hygiene		1	3		
Dental laboratory		1	1	2	
Medicine		3			
Medical laboratory		3			
Nursing		3			
Radiology		2	1	1	
Medical records		1	2	1	
Respiratory therapy		2	1		
Physical therapy		2	1	1	
Medical secretary		1	1	2	
Central supply aide				4	Why aide? Central supply is a department requiring knowledge of sterilization, procurement, selection of product its use, distribution, etc.
Veterinarian		1	2	1	
Mortician			1	3	

Sample

For each topic please indicate its Priority for coverage in the Curriculum
H-high priority --very important
M-medium priority --important
L-low priority --somewhat important

	Suggested Time	Priority H	Priority M	Priority L	Use the space below for clarifying comments justification of priority rankings (optional), suggested time to devote to each unit, or listing additional units or topics if space to the left is not sufficient.
Medical Careers continued:					
Medical librarian		1	1	2	
Dietician		2		2	
Accountant		1	1	2	
Pharmacist		4			
Optometrist		1	3		
Cytologist		2		2	
Speech pathologist		2		2	
Audiologist		2		2	
Hematologist		4			
Microbiologist		4			
Nurse anesthetist		3		1	
Para-Medical Careers					
Medical assistant		2		1	
Receptionist		1	1	2	
Unit manager		1		3	
Ward clerk		2		2	
Admitting clerk		1	1	2	
Purchasing agent		1	1	2	
Cashier				3	
Nurses aide		3		1	
Veterinary aide				4	
Medical technician		2	1		

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H-high priority --very important
M-medium priority --important
L-low priority --somewhat important

	Suggested Time	Priority H	Priority M	Priority L	Use the space below for clarifying comments justification of priority rankings (optional), suggested time to devote to each unit, or listing additional units or topics if space to the left is not sufficient.
Para-Medical Careers cont.:					
Emergency technician		2	1		
Pathology aide		1	2	1	
Blood bank technician		1	3		
Medical photography		1	1	2	
Intravenous therapist		4			
Renal dialysis					
technician		4			
Medical illustrator			2	2	
PERSONAL, VOCATIONAL AND					Emphasis should be on individual learning to understand him or herself in order for him or her to be able to fit into an organization.
PUBLIC RELATIONS	4 weeks				
Interpersonal Relationships					
Ethical responsibilities		3			
Legal responsibilities		3			
Training		3			
Duties		3			
Certification		2	1		
Positions available		3			
Opportunities for					
employment		2			
Private practice		2	1		

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	Suggested Time	Priority H	Priority M	Priority L	Use the space below for clarifying comments justification of priority rankings (optional), suggested time to devote to each unit, or listing additional units or topics if space to the left is not sufficient.
Opportunities for					
employment continued:					
Government service		2	1		
Public health		2	1		
Interrelationships with					
Subject Area					
Orientation experience		2	1		
Educational programs					
available		2	1		
Student investigative					
report		2	1		
Personal Qualities of Health					
Occupation Personnel					
Appearance		3			
Character traits		3			
Abilities on the job		3			
Relationships					
Understanding					
Knowledge		3			
Skill		2			
Appreciation in					
theories & operations					
of basic health services		3			

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	Suggested Time	Priority H	Priority M	Priority L	Use the space below for clarifying comments justification of priority rankings (optional), suggested time to devote to each unit, or listing additional units or topics if space to the left is not sufficient.
Understanding cont.:					
Cooperative attitude					
between employee					
and employer		3			
Medical Terminology					Add 1 week from Orientation to medical terminology.
Construction of					
medical terms		4			
Constructive terms					
related to					
biological disorders		2	1		
Supplementary terms		1	2		
Use of medical dictionary		3			
Word elements		3			
Time formation of words		2	1		
BASIC ANATOMY AND PHYSIOLOGY	10 weeks				
The Skeletal System					
Names of bones		3			
Function		3			
Formation and growth					
of bone		2		1	
Bone markings		2		1	

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L-ow priority --somewhat important

	Suggested Time	Priority H	Priority M	Priority L	Use the space below for clarifying comments justification of priority rankings (optional), suggested time to devote to each unit, or listing additional units on topics if space to the left is not sufficient.
The Skeletal System cont.:					
Bone types		2		1	
Kinds of joints					
(movements)		2		1	
Articulation		2		1	
Muscular System					
Muscles groups according					
to location					
Shoulder		1	2		
Upper arm		1	2		
Lower arm		1	2		
Hand		1	1	1	
Thigh		2	1		
Lower leg		1	2		
Foot		1	1	1	
Head		2	1		
Chest, abdominal					
wall		2	1		
Pelvic		2	1		
Trunk		2	1		
Expression		2	1		
Mastication		2	1		

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	Suggested Time	Priority H	Priority M	Priority L	Use the space below for clarifying comments justification of priority rankings (optional), suggested time to devote to each unit, or listing additional units or topics if space to the left is not sufficient.
Muscular System continued:					
Characteristics of					
muscles					
Function		2	1		
Kinds		2	1		
Structure		2	1		
Size, shape and					
fiber		1	2		
Connective tissue					
components		1	1	1	
Muscle groups					
Location		1	1	1	
Energy source		1		2	
Origin and					
insertions		1		1	
Attachments		2			
Tendons		1	1		
Aponeurosis			1	1	
Contractions		2		1	
The Digestive System					
Introduction					
Organs of digestive					
system		3			

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	Suggested Time	Priority H	Priority M	Priority L	use the space below for clarifying comments justification of priority rankings (optional), suggested time to devote to each unit, or listing additional units or topics if space to the left is not sufficient.
Introduction continued:					
Accessory organs		1	2		
General functions--parts			1	1	
Digestive organs					
Mouth		1	2		
Parts		1	2		
Functions		1	2		
Pharynx		2	1		
Structure		2	1		
Functions		2	1		
Esophagus		2	1		
Structure		2	1		
Function		2	1		
Stomach		1	2		
Parts		1	2		
Muscles		1	2		
Function		1	2		
Small intestines		1	2		
Sections		1	2		
Functions		1	2		
Large intestines		1	2		
Sections		1	2		
Functions		1	2		

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	Suggested Time	Priority H	Priority M	Priority L	Use the space below for clarifying comments justification of priority rankings (optional), suggested time to devote to each unit, or listing additional units or topics if space to the left is not sufficient.
Digestive organs cont.:					
Teeth		1	2		
Structure		1	2		
Layer		1	2		
Types		1	2		
Salivary glands		1	2		
Pairs		1	2		
Function		1	2		
Liver		2	1		
Gallbladder		2	1		
Pancreas		2	1		
Respiratory System					
Introduction		2	1		
Upper respiratory track		2	1		
Physiology		2	1		
Lungs		2	1		
Structure		2	1		
Function		2	1		
Respiration		2	1		
Air pressure		2		1	
Volume movements		2		1	
Respiratory rates		2	1		

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	Suggested Time	Priority H	Priority M	Priority L	Use the space below for clarifying comments justification of priority rankings (optional), suggested time to devote to each unit, or listing additional units or topics if space to the left is not sufficient.
Respiratory rates cont.:					
Factors affecting					
rate		2	1		
Types of respiration		2	1		

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HEALTH OCCUPATION I (Second Semester)	Suggested Time	Priority H	Priority M	Priority L	Use the space below for clarifying comments justification of priority rankings (optional), suggested time to devote to each unit, or listing additional units or topics if space to the left is not sufficient.
BASIC ANATOMY AND PHYSIOLOGY					
continued:	12 weeks				
The Nervous System					
Levels of function					
Higher brain		1	2		
Lower brain		2	1		
Spinal cord		2	1		
Parts of brain		2	1		
Cells that compose					
nervous system					
Types		2	1		
Structure		2	1		
Function		2	1		
Nerve impulse		2	1		
Cord and brain					
fluid spaces		2	1		
Cranial nerves					
Receptors		2	1		
Cell bodies		1	2		
Termination		1	2		
Functions		1	2		
Cardiovascular System					
Blood		2	1		

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	Suggested Time	Priority H	Priority M	Priority L	Use the space below for clarifying comments justification of priority rankings (optional), suggested time to devote to each unit, or listing additional units or topics if space to the left is not sufficient.
Treatment in certain					
diseases continued:					
Allergy		1	1	1	
Nationality Food Patterns			2	1	
FIRST AID	2 weeks				Add 1 week to First Aid, have guest speakers, e.g. physician, paramedic, EMT, Critical Care Nurse, etc. present part of this section.
Theory of First Aid		3		1	
Types of Dressings		2		1	
Use of Resusci-Ann		3			Prefer ANA Standard Life saver approach.
Wounds		2			
Shock		2			
Artificial respiration		2			
Effects of Heat and Cold					
Stroke		2	1		
Cramps		2	1		
Frostbite		2	1		
Bandaging					
Types of dressings		2		1	
Practice		2		1	Varies so much in practice.

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	Suggested Time	Priority H	Priority M	Priority L	Use the space below for clarifying comments justification of priority rankings (optional), suggested time to devote to each unit, or listing additional units or topics if space to the left is not sufficient.
THE PROCESS OF METABOLISM	2 weeks				I would think this material would be integrated when studying endocrine system and nervous system and not stand alone.
Metabolism		/	/	/	
Definition		/	/	/	
Phases		/	/	/	
Metabolic rate		/	/	/	
Basal metabolic rate		/	/	/	
Body Temperature		3			
Range		2			
Heat regulation		3			
Heat balance		3			
Heat loss		3			
Productive nerves		2	1		

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HEALTH OCCUPATION II (First Semester)	Suggested Time	Priority H	Priority M	Priority L	Use the space below for clarifying comments justification of priority rankings (optional), suggested time to devote to each unit, or listing additional units or topics if space to the left is not sufficient.
BLOOD AND ITS FUNCTIONS	3 weeks				
Elements of Blood					
Cell characteristics		2	1		
Blood types		2	1		
Rh factor		2	1		
Function of the Components					
of Blood					
Rh factor		2	1		
Function of the components					
of blood		2	1		
The Common Blood Disorders		2	1		
SPECIAL OXYGEN NEEDS	3 weeks				High priority should be given to safety in use of oxygen.
Methods					
Opening oxygen cylinder			2	1	
Wall outlets for piped-					
in oxygen		1	1	1	
Various means of giving					
oxygen		1	2		
Equipment procedure		1	2		
Emergency Situations					
Respiratory arrest		2	1		

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	Suggested Time	Priority H	Priority M	Priority L	Use the space below for clarifying comments justification of priority rankings (optional), suggested time to devote to each unit, or listing additional units or topics if space to the left is not sufficient.
Other considerations					
continued:					
Voiding		1	2		
Urine		1	2		
Abnormal products		1	2		
Reproductive System					
General body structures					
male and female					
Anatomy and					
physiology		2	1		
Fertilization and					
birth		2	1		
Growth and development					
Heredity and					
environment		2		1	
Physical and social					
development		1	1	1	
Origins and processes					
which make the repro-					
ductive system function					
Terminology					Cover in medical terminology lecture.
Related terms		2	1		
Abbreviations		2	1		

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	Suggested Time	Priority H	Priority M	Priority L	Use the space below for clarifying comments justification of priority rankings (optional), suggested time to devote to each unit, or listing additional units or topics if space to the left is not sufficient.
Abbreviations cont.:					
meaning, spelling					
NUTRITION AND DIET THERAPY	2 weeks				Cut to 1 week, make nutrition and diet therapy a review
Basic Nutrition					
Basic four food groups		/	2		Basic Nutrition through Routine Hospital Diet Planning is repetitious for students that have had basic health.
Seven food stuffs		/	2		
Water balance--					
electrolytes		2	/		
Special Diets					
Calories and weight					
control		/	/		
Foods and its relation					
to help planning menus		/	/	/	
Routine Hospital Diet Planning					
Treatment in certain					
diseases					
Gastrointestinal			2	/	
Gallbladder		/	/	/	
Blood		/	/	/	
Cardiovascular		/	/	/	
Diabetes		/	/	/	

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	Suggested Time	Priority			Use the space below for clarifying comments justification of priority rankings (optional), suggested time to devote to each unit, or listing additional units or topics if space to the left is not sufficient.
		H	M	L	
Endocrine Glands continued:					
Communication		1	2		
Control		2	1		
Integration		2	1		
Disorders caused by					
Excess growth		1	2		
Deficiency		1	2		
Metabolism		2	1		
Urinary System					
Functions					
Systems that remove					
water		2	1		
Degree of acidity					
and alkalinity		1	1		
Body salts		1	2		
Structures of urinary					
system					
Kidneys		2	1		
Cortex		2	1		
Ureters		2	1		
Bladder		2	1		
Urethra		2	1		
Other considerations		2			

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	Suggested Time	Priority H	Priority M	Priority L	Use the space below for clarifying comments justification of priority rankings (optional), suggested time to devote to each unit, or listing additional units or topics if space to the left is not sufficient.
Blood continued:					
Functions		2	1		
Maintenance		2	1		
Composition		2	1		
Clotting		2	1		
Laboratory tests		1	1	1	
Serology		1		2	
Blood disorders			1	1	
Anemia			2	1	
Leukemia			2	1	
Bleeding disorders		1	1	1	
Clotting disorders		1	1	1	
Heart					
Function		2	1		
Location		2	1		
Heart sounds		1	2		
Conductive system of					
heart		1	1	1	
Components		1		1	
Blood vessels		2	1		
Lymphatic system		2	1		
Endocrine Glands					
Functions		1	2		

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	Suggested Time	Priority H	Priority M	Priority L	Use the space below for clarifying comments justification of priority rankings (optional), suggested time to devote to each unit, or listing additional units or topics if space to the left is not sufficient.
Emergency Situations cont.:					
Tracheotomy		2			
Care of the tube		2		2	?
Oxygen in special					
situations		2		1	
Drug therapy		2		1	Proper use of antiasthmatic drugs
Signs of Shock					?
Precautions		3			
Treatments		3			
DISEASES OF CIRCULATORY SYSTEM	3 weeks				Use of tobacco products and their relation to diseases of circulatory system. Throughout the emphasis should be on prevention. Keep people well--no smoking.
Diagnostic Means					
Laboratory test		1	1	1	
Symptoms		2		1	
Predisposing factors		2		1	
Coronary unit		2		1	
Surgical Aspects of Heart					
Conditions					
Closed and open heart					
surgery		2		1	
Various types of heart					
surgery		2		1	

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	Suggested Time	Priority H	Priority M	Priority L	Use the space below for clarifying comments justification of priority rankings (optional), suggested time to devote to each unit, or listing additional units or topics if space to the left is not sufficient.
Surgical Aspects of Heart					
Conditions continued:					
Preoperative preparation		2		1	
Postoperative care		2		1	
Heart transplant		1	1	1	
Peripheral vascular					
disorders		1		1	
Blood and Lymph Disorders					
Agranulocytosis			2	1	
Bleeding disorders		1	1	1	
Others			2	1	
RESPIRATORY DISORDERS	3 weeks				Stress how to keep lungs healthy--environment, tobacco.
Process of Respiration					
Respiratory disorders		2	1		
Functions of the organs					
of respiration		2	1		
Common respiratory					
symptoms		1	2		
Diagnosis of respiratory					
disorders		1	1		
Laboratory tests		1	1	1	

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	Suggested Time	Priority H	Priority M	Priority L	Use the space below for clarifying comments justification of priority rankings (optional), suggested time to devote to each unit, or listing additional units or topics if space to the left is not sufficient.
Diagnosis of respiratory					
disorders continued:					
Blood tests		2		1	
Blood gases		2		1	
X-ray-fluoroscopy					
exams		1	2	1	
Skin tests		1		2	
Common Nursing Procedures					Teach chest percussion postural drainage.
Respiratory Disorders					
Nose--throat		1		2	
Infectious conditions		2		1	
Tuberculosis		2		1	
Neoplasm of the lung		2		1	
Chest injuries		2		1	
Air pollution		1		2	
DISEASES OF NERVOUS SYSTEM	3 weeks				
Brain Disorders					
Injuries		3	1		
Tumors		3	1		
Abscesses		3	1		
Seizures		3	1		

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	Suggested Time	Priority H	Priority M	Priority L	Use the space below for clarifying comments justification of priority rankings (optional), suggested time to devote to each unit, or listing additional units or topics if space to the left is not sufficient.
DISEASES OF NERVOUS SYSTEM cont.:					
Nerve Disorders		1	2		
Vascular		1	1	1	
Degenerative		1	1	1	
Inflammatory		1	1	1	
Disorders of the Spinal Cord		2	1		
DISEASES OF URINARY SYSTEM	3 weeks	1	1		
Review Urinary System As					
It Relates To					
Urinary disorders		1	2		
Emergency problems of					
urologic patients		1	2		
General Care of Urologic					
Patients		2	1		
Infectious conditions		2		1	
Non-infectious disorders		1		2	
Kidney failure		2		1	
Surgical Procedures in					
Kidney Disorders		1		1	
Nephrectomy		2		1	
Nephrotomy		2		1	

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	Suggested Time	Priority H	Priority M	Priority L	Use the space below for clarifying comments justification of priority rankings (optional), suggested time to devote to each unit, or listing additional units or topics if space to the left is not sufficient.
Surgical Procedures in					
Kidney Disorders continued:					
Kidney transplants		2		1	

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HEALTH OCCUPATION II (Second Semester)	Suggested Time	Priority H	Priority M	Priority L	Use the space below for clarifying comments justification of priority rankings (optional), suggested time to devote to each unit, or listing additional units or topics if space to the left is not sufficient.
DISORDERS OF THE SENSORY SYSTEM	3 weeks				Prevention of eye injuries or corrections.
Ear and Eye Diagnostic Tests					
Corrected lenses		2	1	1	
Complications from					
contact lenses		2	1	1	
Common Eye Disorders		3	1		
Treatment		3	1		
Common Ear Disorders		3	1		
Treatment		3	1		
OBSTETRICS	3 weeks				
Pregnancy		2			
How sex is determined		2	1		
Development of baby		2	1		
Signs and symptoms of					
pregnancy		2	1		
Preparing for parenthood		2	1		
Complications of Pregnancy		2	1		
Special problems		2	1		
Labor		2	1		
Fetal presentation		2	1		

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	Suggested Time	Priority H	Priority M	Priority L	Use the space below for clarifying comments justification of priority rankings (optional), suggested time to devote to each unit, or listing additional units or topics if space to the left is not sufficient.
OBSTETRICS continued:					
Neonate		3			
Care		3			
Apgar scale		1	2		
Immediate basic needs					
following birth		3			
Daily care		3			
Infant feeding		3			
Disorders of the					
newborn		2	1		
The premature infant		2	1		
INTRODUCTION TO PHARMACOLOGY--					Why teach this? These people are not going to be administering drugs without a license. Their basic math should be stressed in other courses.
DRUGS AND SOLUTIONS	6 weeks				
Basic Mathematic Review					
Roman numerals		2	1	1	
Addition		2	1	1	
Subtraction		2	1	1	
Multiplication		2	1	1	
Decimals		2	1	1	
Percentages		2	1	1	
Proportions		2	1	1	

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	Suggested Time	Priority H	Priority M	Priority L	Use the space below for clarifying comments justification of priority rankings (optional), suggested time to devote to each unit, or listing additional units or topics if space to the left is not sufficient.
Basic Mathematic Review					
continued:					
Fractions		2	1	1	
Ratio		2	1	1	
Equivalent value		2	1	1	
Systems of Weights and					
Measures		2	1		
Metric system		3	1		
Liters		2	1		
Grams--milligrams		2	1		
Milliliters		2	1		
Cubic centimeters		2	1		
Apothecaries system		2	1	1	Why?
Minims		2	1		
Fluid drams		2	1		
Pints		1	1	1	
Quarts		1	1	1	
Gallons		1	1	1	
Grains		1	1	1	
Drams		1	1	1	
Ounces		1	1	1	
Pounds		1	1	1	

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	Suggested Time	Priority H	Priority M	Priority L	Use the space below for clarifying comments justification of priority rankings (optional), suggested time to devote to each unit, or listing additional units or topics if space to the left is not sufficient.
INTRODUCTION TO PHARMACOLOGY--					
DRUGS AND SOLUTIONS continued:					
Dosages and Solutions					
Abbreviations that must					
be interpreted		2		1	
The prescription blank		2		1	
The medical card		2		1	
Computation of Dosage					
Apothecaries system		1	1	1	
Metric system		1	1	1	
Child's dosage		1	1	1	
Clark's rule		1	1	1	
Young's rule		1	1	1	
Friend's rule		1	1	1	
Insulin dosage		1	1	1	
Injections		1	1	1	
Preparing Solutions		1	1	1	
Full strength		1	1	1	
Stock solution		1	1	1	
Drug Legislation			1	1	
Standards			1	1	
Information on a Prescription		2	1		

Not for high school students, please.

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	Suggested Time	Priority H	Priority M	Priority L	Use the space below for clarifying comments justification of priority rankings (optional), suggested time to devote to each unit, or listing additional units or topics if space to the left is not sufficient.
Mental Health Problems cont.:					
Types of patients		2			
Suicidal		2		1	
Overactive		2		1	
Hostile		2		1	
Confused		2		1	
Underactive		1	1	1	
Special therapies					
Occupational therapy		1	1	1	
Recreational therapy		1	1	1	
Group therapy		1	1	1	
Behavior modification		1	1	1	
Shock therapy		2		1	
Community concern		1	2		
Day clinic		1		2	
Night clinic		1		2	
Vocational					
rehabilitation		1		2	
Mental health center		1		2	
Programs					
National mental					
health act		1	1	1	
State facilities		1	1	1	

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M-medium priority --important
L-low priority --somewhat important

	Suggested Time	Priority H	Priority M	Priority L	Use the space below for clarifying comments justification of priority rankings (optional), suggested time to devote to each unit, or listing additional units or topics if space to the left is not sufficient.
Blood defects cont.:					
Anemias		3		1	
Heart defects		3		1	
Carcinomas		3		1	
Hodgkin's disease		2	1	1	
Lymphosarcoma		2	1	1	
Musculoskeletal					
disorders		2	1	1	
Skin disorders		2	1	1	
Special sense disorders		2	1	1	
Behavior disorders		2	1	1	
The handicapped child		3	1		
MENTAL HEALTH PROBLEMS	2 weeks				
Mental Health Problems					
Definitions-terminology		2	1		
Classes of mental illness		1	1		
Neurosis		2	1		
Psychoses		2	1		
Hospital patient		2	1		
Relationship with health					
care workers		2	1		

For each topic please indicate its Priority for coverage in the Curriculum
H-high priority --very important
M-medium priority --important
L-low priority --somewhat important

	Suggested Time	Priority H	Priority M	Priority L	Use the space below for clarifying comments justification of priority rankings (optional), suggested time to devote to each unit, or listing additional units or topics if space to the left is not sufficient.
Communicable diseases					
continued:					
Streptococcal		3	1		
throat infections					
Rubella		3	1		
Others		3	1		
Considerations					
Incubation		2	1	1	
Isolation		2	1	1	
Quarantine		2	1	1	
Congenital and Chronic					
Disorders					
Gastrointestinal		3		1	
disorders					
Metabolic disorders		3		1	
Maulnutrition		2	1	1	
Cystic Fibrosis		2	1	1	
Diabetes		3		1	
Neurological disorders		3		1	
Genitourinary disorders		3		1	
Blood defects		2		1	
Leukemia		3		1	
Hemophilia		3		1	

For each topic please indicate its Priority for coverage in the Curriculum
H-high priority --very important
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	Suggested Time	Priority H	Priority M	Priority L	Use the space below for clarifying comments justification of priority rankings (optional), suggested time to devote to each unit, or listing additional units or topics if space to the left is not sufficient.
PEDIATRICS--CHILD GROWTH AND					
DEVELOPMENT	4 weeks				
Child Growth and Develop-					
ment					
Physical		3	1		
Motor		3	1		
Emotional		3	1		
Social		3	1		
Intellectual		3	1		
Influence on Growth and					
Development		2	1		
Heredity		2	2		
Environment		2	2		
Stages of Development		2	1		
Infant		3	1		
Toddler		3	1		
Preschool		3	1		
Middle childhood		2	2		
Adolescent		2	1	1	
Deviations From Normal					
Communicable diseases					
Measles		2	2		
Mumps		2	2		

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H-high priority --very important
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	Suggested Time	Priority			Use the space below for clarifying comments justification of priority rankings (optional), suggested time to devote to each unit, or listing additional units or topics if space to the left is not sufficient.
		H	M	L	
Programs continued:					
State education					
programs		/	/	/	
State diagnostic					
centers		/	/	/	

For each topic please indicate its Priority for coverage in the Curriculum
H-high priority --very important
M-medium priority --important
L-low priority --somewhat important

HEALTH OCCUPATIONS III (First and Second Semester)	Suggested Time	Priority H	Priority M	Priority L	Use the space below for clarifying comments justification of priority rankings (optional), suggested time to devote to each unit, or listing additional units or topics if space to the left is not sufficient.
CLASS THEORY IN A SELECTED					
CAREER	18 weeks	3			
CLINICAL PRACTICE OR					
COOPERATIVE EDUCATION	18 weeks	3			

For each topic please indicate its Priority for coverage in the Curriculum
H-high priority --very important
M-medium priority --important
L-low priority --somewhat important